

Appl. No. 09/786,213
Amdt. Dated April 1, 2004
Reply to Final Office Action of January 8, 2004

Attorney Docket No. 81833.0027
Customer No.: 26021

REMARKS/ARGUMENTS

Claims 1-12 are canceled without prejudice. Support for new claim 13 can be found in original claims 1, 2, and 4. Support for new claim 14 can be found in original claim 3. Support for new claim 15 can be found in original claim 5. Support for new claim 16 can be found in original claim 7. Support for new claim 17 can be found in original claim 8. Support for new claim 18 can be found in original claim 9. Support for new claim 19 can be found in original claim 10. Support for new claim 20 can be found in original claims 11 and 12.

Applicant believes the foregoing amendments comply with requirements of form and thus may be admitted under 37 C.F.R. § 1.116(a). Alternatively, if these amendments are deemed to touch the merits, admission is requested under 37 C.F.R. § 1.116(b). In this connection, these amendments were not earlier presented because they are in response to the matters pointed out for the first time in the Final Office Action.

Lastly, admission is requested under 37 C.F.R. § 1.116(a) as presenting rejected claims in better form for consideration on appeal.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103

Claims 1-3, 7, and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nagano et al. (U.S. Patent Application No. 2002/0016120 A1). This rejection is moot due to the cancellation of claims 1-3, 7, and 9.

Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin et al. (U.S. Patent No. 6,080,482). This rejection is moot due to the cancellation of claims 7 and 8.

This invention has a characteristic point on the production apparatus and the production method.

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As shown in Figure 3, the opener roller (6) has a constant speed and has several rows of spikes along the circumference. The fibers (tufts) are further made uniform and fed to the feed trunk (7). And when the web(W) in the feed trunk (7) is compressed in the direction of the width of the web(W) by an air stream, the web(W) automatically is stacked vertically to a portion of a low stacking level by using an air stream and uniformly stacked. Then, the width of the web(W) is narrowed, step by step from the feed trunk (7) to the delivery roller (9) and is compressed in the direction of the thickness of the web(W). This can make the density of the web(W) and the depth of the web(W) accumulated in the feed trunk (7) constant, and produces the three dimensional structure.

That is, the present invention produces the non-woven fabric of the three dimensional structure by compressing in the direction of the width (the direction along the flow of the web) and the thickness of the web(W)(see Figure A below).

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Accordingly, the present invention is entirely different than the invention of Nagano et al.

The fiber lumps have been described in the patent of Nagano et al., but the fiber lumps are a foreign body (Ncps) which is generated when producing the non-woven fabric.

In contrast, the fiber lumps of the present invention are produced by the staple non-woven fabric of the three dimensional structure being pulverized by a square pelletizer or a rotary type universal pulverizer.

And the non-woven fabric structure is produced by the fiber lumps being formed into a desired shape and then applying to secondary heat by a heat fusing treatment.

As a result, the present invention provides a non-woven fabric structure which has the rigidity and the preferred cushioning property suitable for use in automobile applications or bed mattress applications. (Applicant's specification, at p. 32, line 24-p. 35, line 23).

The invention of Martin is directed to the melt-extruded, melt-bondable, thermoplastic filaments or fibers, particularly multicomponent fibers, such as bicomponent fibers of sheath-core type.

In the invention of Martin, the multicomponent filaments described may be fabricated into three dimensional aggregation composing a plurality of the filaments, which can be in staple fiber (page 6, lines 25-28). However, a definite Example is disclosed only with respect to "melt-bonded web".

But the invention of Martin does not teach how to be able to produce a non-woven fabric of the present invention by using a staple fiber. Therefore, based on the information provided in Martin, undue experimentation would be required. Therefore, Martin's disclosure is non-enabling.

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Accordingly, even if the teaching of Nagano et al. i.e., producing a non-woven fabric by using the air-layer method is combined with the teaching of Martin i.e., producing multicomponent filaments, a person of ordinary skill in the art would not obtain the present invention.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, in view of the foregoing remarks, are requested.

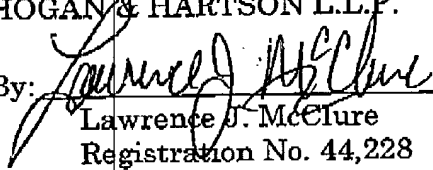
If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6810 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: April 1, 2004

By:


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